IN THE ABSTRACT:

Please amend the abstract as follows:

ABSTRACT

Method intended for real-time modelling, by neural networks, of hydrodynamic characteristics of multiphase flows in transient phase in pipes._In order to specifically take account of the possible flow regimes of fluids in pipes, various neural or "expert" models are formed for several flow regimes (or subregimes) in the whole of the variation range of the hydrodynamic characteristics of the flows (preferably for each one of them), as well as a neural model estimating the probability of belonging of the flows to each flow regime or subregime, knowing some of the characteristics thereof. The probabilities obtained are used for weighting the estimations delivered by each neural model, the result of the weighted sum being then the estimation eventually retained._Applications ÷to various industries and notably for modelling of hydrocarbon flows in pipelines.